





# about me

#### TECHNICAL AND ENGINEERING CO.

was established in 2000 with the aim of manufacturing different types of architectural and industrial glass. The company covers an area of 11000 sqm, with a production hall of 6000 sqm.

#### PERSIA JAM ARCHITECTURAL GLASS FUTURE

offers a range of processed glasses, divided into different categories:

- 1. Structural safety tempered glass
- 2. Industrial safety glass
- 3. Laminated glass, including architectural, curtain walling, and bulletproof glass
- 4. All types of insulating glass units
- 5. Special glass for home appliances, including gas ovens, refrigerator shelves, and kitchen cabin hoods.



In order to fulfill the technological requirement and quality assurance of market needs, Persia Jam has recently stablished and equipped the R&D department to develop training programs for technical and commercial staff to catch up with the day by day progressing market needs, The new stepped laminated and improved bullet proof glasses are the unique outcome of the Persia Jam management policy.



## PRODUCTS RANGE

The company produces safety tempered glass in jumbo dimensions, ranging from 50\*50 mm to 7000\*3500 mm. They also produce different types of tempered glass, structural laminated and bulletproof glass, decorative glazing, and industrial, home appliances, and railing glazing.

Moreover, they produce different types of insulating glazing, including double and triple units, four-sided step units, spider glazing, spandrel units, and sun-energy glazing.

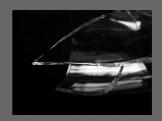
The company offers technical services, such as engineering analysis of glazing projects, U-Value analysis of different glazing, and laboratory tests to evaluate physical property of industrial and architectural glazing. They also hold technical certificates achieved from famous brands like AGC and Saint Gobain Schott.

Lastly, the glass produced by TECHNICAL AND ENGINEERING CO. goes through an annealing process in a lehr to prevent shattering during cooling. This process produces annealed glass, which can undergo cutting, edging, drilling, and bevelling prior to further processing.

### **Tempered Glass**

#### ANNEALED GLASS

When glass ribbon leaves the tin bath, in float glass production line, it enters into a long heat treatment tunnel which is called annealing lehr. Annealing lehr controls the rate of cooling to decrease temperature different to reduce any shatters in the glass to absolute minimum. The glass is called annealed glass which can undergo cutting , edging , drilling and beveling prior to any further processes.



#### **HEAT STRENGTHENED GLASS**

"Heat strengthened glass is a semi-tempered glass that retains the normal properties of annealed float glass. It is similar to tempered glass, except that the cooling is slower than toughened glass but faster than annealed glass. Heat strengthened glass is about twice as strong as annealed glass. Selecting the proper type of glass or a combination of different glass types is very important when implementing a project that uses a significant number of glass panes in its structure.







#### **TEMPERED GLASS**

Tempered or toughened glass is a type of safety glass processed by controlled thermal or chemical treatment to increase its strength compared to normal annealed glass. Tempered glass can be made from annealed glass via a thermal tempering process. The glass is placed on a roller table and taken through a furnace that heats it well above its transition temperature of 564°C to around 620°C. The glass is then rapidly cooled with forced air drafts while the inner portion remains free to flow for a short time. Tempered glass is about five times stronger than ordinary or annealed glass and unlike annealed glass, which can shatter into jagged pieces when broken, tempered glass fractures into small, relatively harmless pieces. Since no other process can be done on tempered glass, all cutting, edging, drilling, and beveling processes should be carried out prior to tempering. Persia Jam is mobilized with a 7000\*3500 mm full convection tempering furnace, which is unique in the country and the region. Glass thickness from 4 to 19mm can be precisely processed in this furnace under standard conditions.



Max. dimension: 7000\*3500 mm

Min. dimension: 50\*50 mm

Thickness: 4 - 19 mm

#### **LAMINATED GLASS**

Laminated glass is a type of safety glass that holds together when shattered. It is basically a glass sandwich, made of two or more plies of glass with a vinvl interlayer in between. The glass tends to stay together in case one is broken, thus qualifying it as a safety glazing material.

Benefits of laminated glass include safety (it does not shatter when broken, reducing the risk of injuries), aesthetics (a variety of colored and decorative interlayers can be used), strength (tempered and HS glass can be incorporated to increase the mechanical strength of laminated glass), energy control (low-e glass can maximize the energy controlling property of glazing), sound insulation (acoustic interlayer can reduce sound transmission), security (the high elastic strength of interlayer can prevent unauthorized entrance to a building), protection against storms and hurricanes (using proper interlayer and glass combinations), and UV protection (with PB interlayer, it filters out UV light up to 98%).



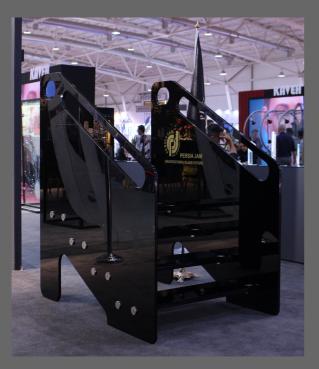
#### **Laminated Glass**

Resistant to penetration and breakage.Made of two more glass panes for robust strength



### **Tempered Glass** Absorbs impacts to some

extent and scatters into small harmless pieces.



#### **LAMINATED GLASS**

laminated glass is used as one of the panes. Using decorative and smart glass can also make the environment more beautiful.



## **SUPER SAFE**





### **LAMINATED GLASS**





#### **INSULATING GLASS**

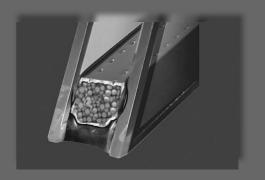
Insulating glass, more commonly known as double glazing, consists of two or three glass panes separated by a gas-filled space to reduce heat transfer across the building. An aluminum spacer filled with desiccant keeps the required distance between the two or three panes. Isobutyl is applied as the primary sealant to keep the double glazing units together, and later, polysulfide or silicon glue is used as a secondary sealant to make the unit water- and airtight. The air inside the units is then replaced with gas filling (Argon 90%). ADVANTAGES: Thermal insulation and solar energy control in winter and summer time, good sound insulation, better UV control when

#### **ADVANTAGES:**

Thermal insulation + solar energy control in winter and summer time. Good sound insulation.

Better UV control when laminated glass used as one of the panes.

Using decorative and smart glass will make the environment more beautifull.



### **INSULATING GLASS**



Max. dimension: 6000\*3000 mm Min. dimension: 300\*200 mm

Max thickness: 60 mm

## **INSULATING GLASS**









## PRINTED TEMPERED GLASS HOME APPLIANCES



Persia Jam countinious tempering line, which is dedicated to meet the domestic and regional market, is the most advnced one of its

kind being able to process 3.8 mm float glass which is mostly used for home appliances in related industry.







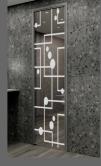
## **Decorative Glass** Sandblast

During the process of sandblasting, abrasive materials will be thrown against the surface of the glass under high pressure and it makes the glass matte. It is used for preventing from having view of empty spaces and also for making different designs on glass. These glasses can be used in interior and exterior view of residential, commercial and official building.









## **Bulletproof Glass**











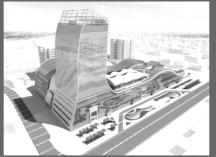
## Being special requires experience.



### Different executed projects in Iran

Many high-rise commercial and residential buildings have benefited from our constructional glazing. Some of these projects are listed below.









## **Quality Assurance**









Persia Jam has become one of the top three glass processors in the country and the region by imparting the most updated European technology for glass processing machinery and equipment along with expert manpower. Achieving various quality certificates is a good example of our quality assurance management system."

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# CONTACT US

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## Thank you for watching